

**UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

VIRTAMOVE, CORP.,

Plaintiff,

v.

MICROSOFT CORPORATION,

Defendant.

Case No. 1:25-cv-00794-ADA

**DEFENDANT MICROSOFT'S
OPENING CLAIM CONSTRUCTION BRIEF**

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Ex. No	Title
A	U.S. Patent No. 7,519,814 (“’814 patent”)
B	U.S. Patent No. 7,784,058 (“’058 patent”)
C	File History of the ’814 patent (“’814 File History”)
D	File History of the ’058 patent (“’058 File History”)
E	Assignment History of the ’814 Patent
F	Assignment History of the ’058 Patent
G	Declaration of Dr. Angelos Keromytis (“Keromytis Decl.”)
H	The Authoritative Dictionary of IEEE Standards Terms 251, (7 th ed. 2000) (“2000 IEEE Dictionary”)

I. INTRODUCTION

Microsoft Corporation (“Microsoft” or “Defendant”) submits this opening claim construction brief regarding the proper construction of certain disputed terms appearing in the claims of U.S. Patent Nos. 7,519,814 (Ex. A, “the ’814 patent”) and 7,784,058 (Ex. B, “the ’058 patent”) (together, “the Asserted Patents”), which Plaintiff VirtaMove, Corp. (“VirtaMove” or “Plaintiff”) asserts against Defendant.¹

II. OVERVIEW OF THE ASSERTED PATENTS

A. ’814 Patent

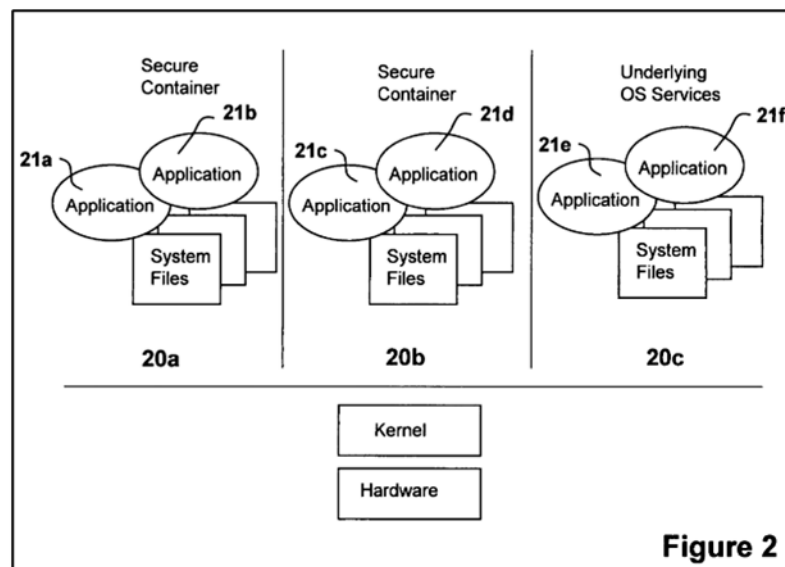
The ’814 patent is entitled “System for Containerization of Application Sets.” ’814 patent, 17:41-61. The ’814 patent describes a way of organizing data on a computer system into what the patent calls “containers.” Notably, the patent does not purport to have invented containers. *See, e.g., id.* at 1:51-2:12 (“Background of the Invention” describing “existing solutions” including “containers” and identifying prior art product that provides “separation of an application from the underlying operating system.”).

The patent includes a definition of “container” that provides, in part, that it is “[a]n aggregate of files required to successfully execute a set of software applications on a computing platform.” ’814 patent, at 2:23-25. While the computer system has shared hardware (processors, memory, etc.), “underlying OS [operating system] services” (software managing the system’s shared resources), and a kernel (a privileged part of the operating system capable of directly controlling the hardware), each container has one or more “application[s]” and “[operating] system files” necessary for the execution of that container’s application. That way, the

¹ Microsoft notes that this Opening Claim Construction Brief is identical in substance to Oracle Corporation’s Opening Claim Construction Brief in *VirtaMove Corp. v. Oracle Corp.*, Case No. 7:24-cv-00339-ADA (W.D. Tex.).

application in the container does not depend on files in the computing system’s operating system because each container contains “all files required to successfully execute a set of software applications on a computing platform.” *Id.* at 7:26-27. Because these system files are now copied and stored in the containers, the files are organized in the container’s unique “root file system”—that is, “each container has a separate physical copy of the files required by applications associated with the container.” *Id.* at 11:35-39.

Figure 2, below, illustrates a system with “containers” of applications, each of which includes a separate set of “system files”:

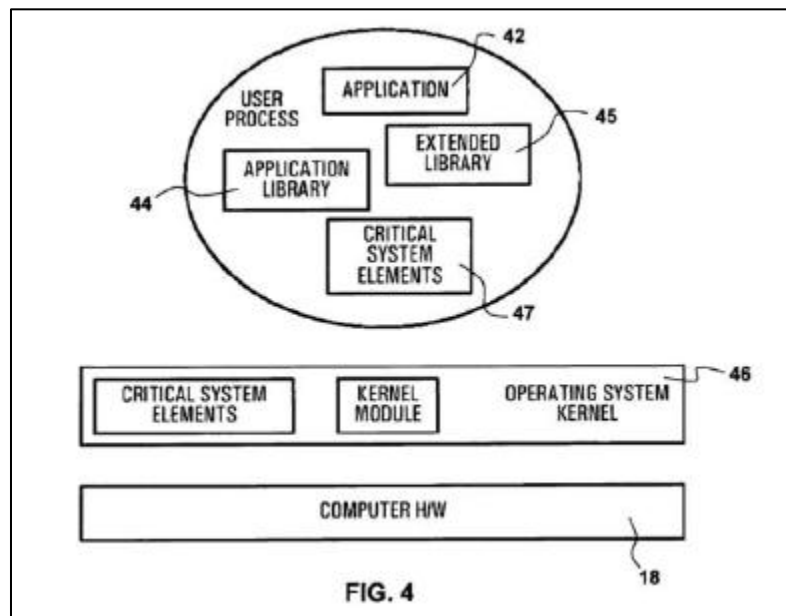


B. '058 Patent

The '058 patent is entitled “Computing System Having User Mode Critical System Elements as Shared Libraries.” '058 patent, cover. The purported invention of the '058 patent is using linking and shared libraries to make certain “critical system elements” available to applications, but the patent does not delineate what constitutes a “critical system element.” The '058 patent describes Operating System Critical System Elements (OSCSEs) and Shared Library Critical System Elements (SLCSEs). The patent teaches a shared library containing SLCSEs for

use by software applications, such that they “can be directly called by the applications...and as such can be run in the same context as the applications,” *id.* at 8:31-33; *see also id.* at Fig. 4. The shared library does not share the SLCSEs “among applications even though the code is shared,” and the “library includes replicas or substantial functional equivalents or replacements of kernel functions” provided by the OSCSEs. *Id.* at 3:40-45, 8:27-28.

Figure 4, below, depicts how the “critical system elements [can] exist in the same context as an application” while also separately being “included in the operating system kernel.” ’058 patent, 9:40-52. The patent teaches that the “same functionality” or “like services” are provided to an application and in the operating system kernel. ’058 patent, 9:52-56.



III. DISPUTED CLAIM TERMS

A. The Asserted Patents Provide Explicit Lexicography

The two disputed terms below should be construed to match the explicit definitions provided in their respective patent’s specification. “Where the specification instructs as to the meaning of a claim term, ‘the inventor’s lexicography governs.’” *Grace Instrument Indus., LLC v. Chandler Instruments Co., LLC*, 57 F.4th 1001, 1010 (Fed. Cir. 2023) (quoting *Phillips v.*

AWH Corp., 415 F.3d 1303, 1316 (Fed. Cir. 2005)). A patentee may “choose to be his own lexicographer and use terms in a manner other than their ordinary meaning, as long as the special definition of the term is clearly stated in the patent specification.” *Alnylam Pharms., Inc. v. Moderna, Inc.*, 138 F.4th 1326, 1333 (Fed. Cir. 2025) (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).

“When a patentee explicitly defines a claim term in the patent specification, the patentee’s definition controls” as “binding lexicography.” *Martek Biosciences Corp. v. Nutrinova, Inc.*, 579 F.3d 1363, 1380 (Fed. Cir. 2009); *Honeywell Int’l Inc. V. Universal Avionics Sys. Corp.*, 493 F.3d 1358, 1361 (Fed. Cir. 2007) (“When a patentee defines a claim term, the patentee’s definition governs, even if its contrary to the conventional meaning of the term.”). In such cases, “[t]he specification acts as a dictionary when it expressly defines terms used in the claims.” *Vitronics Corp.*, 90 F.3d at 1582; *see also Alnylam Pharms., Inc.*, 138 F.4th at 1333 (finding the language within a “Definitions section” in the patent to provide “definitional” language); *see also Thorner v. Sony Comput. Ent. Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012) (finding a patentee used lexicography when using the phrase “defined below” in the specification). A patentee’s use of definitional language indicates their intent to act as their own lexicographer and redefine the term rather than merely restating its plain-and-ordinary meaning. *Datanet LLC v. Dropbox, Inc.*, No. 6:22-dc-001142, 2023 U.S. Dist. LEXIS 203012, at *79-80 (W.D. Tex. Nov. 10, 2023) (“In the Court’s experience, it is relatively rare for a patentee to use express language such as ‘I define’ or label a section as ‘Definitions.’ As such, when a patentee uses such language, the Court concludes that a patentee had had the requisite intent to define the term.”).

1. “container” (’814 patent, claims 1, 2, 6, 9, 10, 13)

Microsoft’s Construction	VirtaMove’s Construction
<p>“An aggregate of files required to successfully execute a set of software applications on a computing platform. Each container for use on a server is mutually exclusive of the other containers, such that read/write files within a container cannot be shared with other containers. The term ‘within a container’, used within this specification, is to mean ‘associated with a container’. A container comprises one or more application programs including one or more processes, and associated system files for use in executing the one or more processes; but containers do not comprise a kernel; each container has its own execution file associated therewith for starting one or more applications. In operation, each container utilizes a kernel resident on the server that is part of the operation system (OS) the container is running under to execute its applications.”</p>	<p>No construction necessary; plain and ordinary meaning</p>

The parties agree that the definition of this term may be found within the ’814 patent’s specification but disagree as to which portions of the patentee’s language should be included in the construction.² Microsoft’s construction mirrors and includes all relevant definitional portions of the patentee’s chosen language. *See* ’814 patent, 2:23-42. Conversely, VirtaMove’s construction and its counter-proposal ignore the definitional text without explanation or rationale.

² On Thursday, July 10, 2025, counsel from VirtaMove emailed Microsoft to propose a different construction, “An aggregate of files required to successfully execute a set of software applications on a computing platform. Each container for use on a server is mutually exclusive of the other containers, such that read/write files within a container cannot be shared with other containers,” which matches verbatim the first two sentences of Microsoft’s proposed construction.

The term should be given the full scope of its meaning as intended by the patentee. The '814 patent includes an explicit definition section, beginning with “[t]he following definitions are used herein” ('814 patent, 2:16) and followed by the identifier “Container:” and the term’s definition. '814 patent, 2:23-42; *see also Datanet LLC*, 2023 U.S. Dist. LEXIS 203012, at *78-79 (“Given that this section is entitled ‘Definitions’ and each term is listed, followed by an em-dash, and then a definition... the Court concludes that the patentee intended to define each of these terms.”). Like in *Vitronics* and *Datanet*, the language and the format of the '814 specification indicates the patentee’s intent to redefine the term “Container.” This is further indicated by the patentee’s use of punctuation that isolates the term being defined: “Container:”.

'814 patent, 2:23-42 (emphasis added); *see Sinorgchem Co., Shandong v. Int'l Trade Comm'n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007) (that a term is “set off by quotation marks” is “a strong indication that what follows is a definition”). The patentee chose to act as its own lexicographer and its chosen definition is binding. *See Shire Dev. LLC v. Teva Pharms. USA, Inc.*, No. 1:17-cv-01696, 2019 U.S. Dist. LEXIS 31753, at *28 (D. Del. Feb. 28, 2019). Microsoft’s construction should be adopted at least because it includes all relevant definitional language for this term.

VirtaMove’s proposed construction and its subsequent counter-proposal should be rejected because they both omit context and limitations that the patentee deliberately chose to include in its definition of “container.” The full scope of a patentee’s chosen language should be considered where “the Patentee included important definitional information throughout [an] entire paragraph.” *Shire Dev. LLC*, 2019 U.S. Dist. LEXIS 31753, at *28 (holding that the full definitional language should apply where “the Parties agree that the lexicographic definition . . . can be found in [a specific] paragraph of the specification” and disagree only on “the proper closing boundary of the lexicographic definition” within said portion); *see also Core Wireless*

Licensing S.A.R.L. v. LG Elecs., Inc., No. 2:14-cv-0912, 2015 U.S. Dist. LEXIS 151310, at *71 (E.D. Tex. Nov. 7, 2015) (holding a definition’s multiple “sentences together provide context and understanding to the term”); *Medtronic Vascular Inc. v. Boston Sci. Corp.*, 526 F. Supp. 2d 613, 625 (E.D. Tex. Dec. 13, 2007) (finding that “reading the paragraph as a whole” demonstrates “the entire paragraph . . . [is] part of the definition”). VirtaMove’s proposals ignore at least the following language set forth in the patent’s express definition of the term:

The term “within a container,” used within this specification, is to mean “associated with a container.” A container comprises one or more application programs including one or more processes, and associated system files for use in executing the one or more processes; but containers do not comprise a kernel; each container has its own execution file associated therewith for starting one or more applications. In operation, each container utilizes a kernel resident on the server that is part of the operating system (OS) the container is running under to execute its applications.

The patentee’s entire definition includes necessary description to understand what a “container” is and how it operates, specifically in relation to the operating system’s kernel, while VirtaMove’s construction ignores these limitations. Here, like in *Shire Dev.*, the contested portions of the patentee’s definition provide necessary context and information needed to understand the patentee’s intended meaning and scope of this term and should be included in the construction.

For at least these reasons, the Court should adopt Microsoft’s construction.

2. “shared library” (’058 patent, claims 1, 2)

Microsoft’s Construction	VirtaMove’s Construction
“an application library code space shared among all user mode applications. The code space is different than that occupied by the kernel and its associated files. The shared library files are placed in an address space that is accessible to multiple applications” wherein	“an application library whose code space is shared among all user mode applications”

“application library” is “a collection of functions in an archive format that is combined with an application to export system elements.”	
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Microsoft’s construction stems from explicit lexicography in the definition section of the ’058 patent’s specification. *See* ’058 patent, 6:46-53. In contrast, VirtaMove’s proposed construction: (1) deletes most of the patent’s definition; (2) adds new words to the patent’s definition; and (3) ignores the specification’s definition of “application library,” even though it appears in the definition of “shared library.”

Here, the patentee clearly intended to, and did, define the term “shared library” in the patent specification. First, the definition follows the phrase “[b]y way of introduction, a number of terms will now be defined.” ’058 patent, 6:4-5; *see Alynham Pharms., Inc.*, 138 F.4th at 1333. Second, the terms are set off using grammar that isolates the term being defined: “Shared library:” and “Application library:”. ’058 patent, 6:46, 6:49 (emphasis added); *see Sinorgchem Co., Shandong*, 511 F.3d at 1136. Because the patentee unambiguously intended to, and did, define “shared library” in the patent specification, the specification’s definition controls.

Microsoft’s construction should be adopted because it tracks the definition in the specification. The construction uses additional words only to incorporate the specification’s explicit definition of “application library,” which appears in the definitional text of “shared library.” *See* ’058 patent, 6:46-53. In contrast, VirtaMove’s construction uses only a small fragment of the explicit lexicography and modifies it by injecting additional words not found in the specification’s definition. VirtaMove changes the patent’s definition to be “an application library whose code space is shared among all user mode applications,” broadening the patentee’s scope and ignoring the patentee’s definition of “application library.” The result is that VirtaMove improperly rewrites and broadens the specification’s explicit definition. *See, e.g., Linear Tech.*

Corp. v. Int'l Trade Comm'n, 566 F.3d 1049, 1054 (Fed. Cir. 2009) (“Because the Commission construed this limitation according to the definition in the specification, the Commission's construction ... is correct.”); *Hyperphrase Techs., LLC v. Google, Inc.*, 260 F. App'x 274, 279 (Fed. Cir. 2007) (a construction is erroneous where it “go[es] beyond [the] explicit definition”); *Bd. of Regents v. Ethicon, Inc.*, No. 1-17-CV-1084-LY, 2018 U.S. Dist. LEXIS 203914, at *21 (W.D. Tex. Nov. 30, 2018) (where a patent explicitly defines a term, “there is no need to search further for the meaning of the term.”) (quoting *Multiform Desiccants, Inc. v. Medzam, Ltd.*, 133 F.3d 1473, 1478 (Fed. Cir. 1998)).

For at least these reasons, the Court should adopt Microsoft's construction.

B. The Claims Should Be Read Consistently With Patentee's Statements During Prosecution

The two terms below should be construed consistently with the patentee's affirmative statements during prosecution that limit their scope. “The prosecution history constitutes a public record of the patentee's representations concerning the scope and meaning of the claims.”

Hockerson-Halberstadt, Inc. v. Avia Grp. Int'l, Inc., 222 F.3d 951, 957 (Fed. Cir. 2000). Thus, “[t]he public notice function of a patent...requires that a patentee be held to [statements] during the prosecution of his patent,” “without attempting to decipher whether the examiner relied on them, or how much weight they were given.” *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 789 F.3d 1335, 1344 (Fed. Cir. 2015); *Fenner Invs., Ltd. v. Cellco P'ship*, 778 F.3d 1320, 1325 (Fed. Cir. 2015). In other words, a patentee is “preclude[d] ... from recapturing through [a] claim interpretation specific meanings disclaimed during prosecution.” *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1324 (Fed. Cir. 2003). “[E]ven where ‘prosecution history statements do not rise to the level of unmistakable disavowal, they do inform the claim construction.’”

Personalized Media Commc'ns, LLC v. Apple Inc., 952 F.3d 1336, 1340 (Fed. Cir. 2020)

(quoting *Shire Dev., LLC v. Watson Pharms., Inc.*, 787 F.3d 1359, 1366 (Fed. Cir. 2015)). For example, “an applicant’s amendment accompanied by explanatory remarks can define a claim term by demonstrating what the applicant meant by the amendment.” *Id.*

Here, the examiner rejected the claims of both Asserted Patents during prosecution as unpatentable over the prior art. After these rejections, VirtaMove³ argued that the claims were distinguishable from the prior art while pointing to specific, purportedly unmet language in the claims. Having now obtained the Asserted Patents, VirtaMove may not construe the claims in a manner that would recapture the claim scope it surrendered during prosecution. Yet, in its proposed constructions of the following two terms, that is precisely what VirtaMove seeks to do.

1. “forms a part of the one or more of the plurality of software applications” (’058 patent, claim 1)

Microsoft’s Construction	VirtaMove’s Construction
literally form a part of the application such that it resides in the same address space as application code, in contrast to a proxy that is exclusive of the application	No construction necessary; plain and ordinary meaning.

Claim 1 of the ’058 patent recites that “when one of the SLCSEs⁴ is accessed by one or more of the software applications,” the SLCSE “forms a part of the one or more of the plurality of software applications.” Microsoft proposes that the limitation’s meaning should track VirtaMove’s statements during prosecution to distinguish the patent claims from the prior art; VirtaMove’s proposal ignores that language.

In an Office Action dated September 22, 2009, the examiner rejected claim 1 as unpatentable over U.S. Pat. No. 6,212,574 (“O’Rourke”) in view of U.S. Pat. No. 5,481,706

³ When the Asserted Patents were being prosecuted, Trigen Corp. was the name of the assignee. Ex. E (Assignment History of the ’814 Patent); Ex. F (Assignment History of the ’058 Patent).

⁴ Shared Library Critical System Element or SLCSE

(“Peek”). Relevant here, the examiner found that O’Rourke’s “proxy” is an “SLCSE” as claimed. Ex. D (’058 File History Excerpt, September 22, 2009 Non-Final Rejection), at 3-4. In O’Rourke, a “proxy” may be incorporated into a “software component” using “run time linking of code similar to the way the dynamic link library is loaded or any number of technologies [that] allow run time incorporation of one software component into another software component.” O’Rourke, 17:18-23.

VirtaMove did not dispute during prosecution that O’Rourke’s “proxy” was an “SLCSE,” and instead argued that O’Rourke’s “proxy” did not meet the claim’s requirement that when an “SLCSE is accessed ... it *forms a part of* the ... application”:

[O’Rourke] fails to disclose that when one of the SLCSEs is accessed by one or more of the plurality of software applications, it forms a part of the one or more of the plurality of software applications. In other words, the SLCSEs literally form part of the application. SLCSEs reside in the same address space as application code, in contrast to a proxy that is exclusive of the application.

Ex. D (’058 File History Excerpt, January 15, 2010 Applicant Arguments/Remarks Made in an Amendment), at 25. VirtaMove thus distinguished during prosecution between (1) O’Rourke’s “proxy,” which is “incorporat[ed]” into the “software component” by being “link[ed]” at “run time” (O’Rourke, 17:18-23), and (2) the claimed “SLCSE,” which “forms a part of” a “software application” because it “reside[s] in the same address space as application code.” Ex. D (’058 File History Excerpt, January 15, 2010 Applicant Arguments/Remarks Made in an Amendment), at 25. A patentee must “be held to [his statements] during the prosecution of his patent.” *See Teva Pharms.*, 789 F.3d at 1344; *see also Fenner Invs.*, 778 F.3d at 1325 (“The interested public has the right to rely on [Patentee’s] statements made during prosecution.”). VirtaMove cannot use claim construction to reclaim patent scope that it previously disavowed. *Omega Eng’g, Inc.*, 334 F.3d at 1324.

2. “each of the containers has a **unique** root file system that is different from an operating system’s root file system” (’814 patent, claim 1)

Microsoft’s Construction	VirtaMove’s Construction
each container has a separate physical copy of the files required by applications associated with the container	No construction necessary; plain-and-ordinary-meaning.

The parties’ dispute centers on what it means for a container to have a “**unique** root file system” that is “**different from** an operating system’s root file system.” Microsoft’s construction tracks the language VirtaMove used during prosecution to distinguish the limitation from the prior art. VirtaMove’s proposal, again, ignores that language.

In an Office Action dated June 3, 2008, the examiner rejected claim 1 as anticipated by U.S. Pat. No. 6,381,742 (“Forbes”). Ex. C (’814 File History Excerpt, June 3, 2008 Non-Final Rejection), at 1, 3. Like the ’814 patent, Forbes is directed to the problem of installing software packages that may have multiple dependencies. Forbes, Abstract. Forbes uses a centralized “code store data structure” to “track components of software packages that have been installed on the local computer.” Forbes, 8:48-55. If an application to be installed requires a dependency but the code store data structure does not include it, the dependency is installed on the “local computer.” Forbes, 9:28-30, 9:39-41.

To overcome the Office Action rejection, VirtaMove amended independent claim 1 to recite that “each of the containers has a **unique** root file system that is different from an operating system’s root file system.” Ex. C (’814 File History Excerpt, September 3, 2008 Claim Amendments), at 39-40 (emphasis added). As support for the amendment, VirtaMove quoted the part of the specification explaining that “each container has a separate physical copy of the files required by the applications associated with the container.” Ex. C (’814 File History Excerpt, September 3, 2008 Applicant Arguments/Remarks Made in an Amendment), at 51. Thus, in explaining the “significant distinction between” Forbes and “the instant invention,” VirtaMove

asserted that “the claimed invention is defined as having ‘secure’ containers” with “copies or modified copies of OS files” that “*reside with* each container.” Ex. C (’814 File History Excerpt September 3, 2008 Applicant Arguments/Remarks Made in an Amendment), at 52 (emphasis added). In other words, VirtaMove’s argument makes clear that what makes a container’s “root file system” *unique* and *different* from the “operating system’s root file system” is that (unlike Forbes, which stores a single copy of each dependency), each of the containers’ file systems have “a separate physical copy of the files required by applications associated with the container.” Forbes, 8:48-55, 9:28-30, 9:39-41; Ex. C (’814 File History Excerpt September 3, 2008 Applicant Arguments/Remarks Made in an Amendment), at 51.

Because VirtaMove expressly distinguished the purported invention from the prior art on the ground that the containers must each have their own root file system with separate physical copies of the necessary files, this term must have the same scope limitations. *See Teva Pharms.*, 789 F.3d at 1344; *see also Fenner Invs.*, 778 F.3d at 1325; *Omega Eng'g, Inc.*, 334 F.3d at 1324.

C. Claim 1 Of The '058 Patent Is Indefinite

Claim 1 of the '058 patent includes two terms that are indefinite because they recite subjective language without any objective measure that would allow a person of ordinary skill in the art to reasonably understand their bounds. “[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). “[F]acially subjective claim language without an objective boundary” renders a claim indefinite. *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1373 (Fed. Cir. 2014). The objective boundary analysis is straight-forward: to be definite, the claim must inform those of skill in the art what is protected and what is not. *See id.* at 1371 (“The claims, when read in light of the specification and the prosecution history, must provide

objective boundaries for those of skill in the art.”). A claim is indefinite when the question of infringement hinges upon a subjective determination or the “unpredictable vagaries of any one person’s opinion.” *Intell. Ventures I LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1381 (Fed. Cir. 2018); *Dow Chem. Co. v. Nova Chems. Corp. (Canada)*, 803 F.3d 620, 625 (Fed. Cir. 2015); *Teva Pharms.*, 789 F.3d at 1344-45. “[W]hen there is no objective standard by which to determine the scope of the word of degree, the word of degree renders the claims indefinite.” *KLA-Tencor Corp. v. Xitronix Corp.*, No. A-08-CA-723-SS, 2011 U.S. Dist. LEXIS 9436, at *7 (W.D. Tex. Jan. 31, 2011).

1. “critical system elements” (’058 patent, claim 1)

Microsoft’s Construction	VirtaMove’s Construction
Indefinite	“any service or part of a service, ‘normally’ supplied by an operating system, that is critical to the operation of a software application”

The meaning of “critical system elements” rests on the subjective determination of individuals evaluating what is “critical” or not. Different individuals may have different opinions and understandings regarding whether a system element is “critical.” Nothing in the intrinsic record or extrinsic evidence provides a POSITA with reasonable clarity as to the proper scope of this term. VirtaMove’s proposed construction employs a circular definition—describing a critical system element as an element “that is critical”—and introduces additional ambiguities regarding what it means to be “normally” supplied by an operating system.

The intrinsic record fails to provide any objective standard to guide a POSITA in determining when a system element is, or is not, “critical” to the operation of a software application. *See* Ex. G (Keromytis Decl.), ¶¶ 36, 46, 48, 49. “The claims, when read in light of the specification and the prosecution history, must provide objective boundaries for those of skill in the art.” *Interval Licensing*, 766 F.3d at 1371. “Critical” has no objective meaning (alone or in the

context of “critical system elements”) and relies on a subjective determination of importance. *See* Ex. G (Keromytis Decl.), ¶ 33. In *Intellectual Ventures*, the Federal Circuit found the term “QoS requirements” to be “entirely subjective” and characterized by “what network performance characteristic is most important to a particular user.” *Intell. Ventures I LLC*, 902 F.3d at 1381. Specifically, the term could have “different meanings for different users.” *Id.* “Critical,” like “QoS requirement” and “aesthetically pleasing,” is purely subjective and varies with the differing opinions of what is most important to the application. The remaining claim language merely describes generic actions, including “having,” “storing,” and “providing” critical system elements, without identifying what elements are critical or what criteria may identify them as critical. ’058 patent, cl. 1.

The specification’s explicit definition fails to provide any further guidance as to the boundaries of this term. The ’058 patent defines a “Critical System Element (CSE)” as

“[a]ny service or part of a service, ‘normally’ supplied by an operating system, that is critical to the operation of a software application. A CSE is a dynamic object providing some function that is executing instructions used by applications.”

’058 patent, 6:6-10. The definition merely repeats the disputed word (“critical”) and therefore fails to adequately define which system elements are critical versus non-critical. The Federal Circuit has repeatedly found that such superfluous definitions, which merely restate the term at issue, are not useful for resolving claim construction disputes. *See, e.g., Abbott Lab ’ys v. Sandoz, Inc.*, 544 F.3d 1341, 1360 (Fed. Cir. 2008) (“‘Claim construction’ is for the purpose of explaining and defining terms in the claims and usually requires use of words other than the words that are being defined”); *see also Huawei Techs. Co. v. T-Mobile US, Inc.*, No. 2:16-CV-00057-JRG-RSP, 2017 U.S. Dist. LEXIS 96097, at *50 (E.D. Tex. June 21, 2017) (“the Court rejects Plaintiff’s construction because it uses the disputed term to define itself”).

The exemplary CSE's identified by the '058 patent do not provide any more guidance. After the patent's circular definition, the specification provides "EXAMPLE CSEs" including "[n]etwork services," "[f]ile system services," "file system optimizations," and "network optimizations." '058 patent, 6:11-28. The specification does not explain what makes each examples "critical" and thus fails to provide a POSITA with any objective indications for when an element is (or is not) "critical." Further, these examples recite the same type of subjective "optimizations" that were ruled indefinite in *Intellectual Ventures*.

The extrinsic evidence cannot save the term. The word "critical" is not a well-known term of art in the context of software applications such that the patent would not need to set a boundary. *See e.g.*, Ex. G (Keromytis Decl.), ¶¶ 47-49. The 2000 IEEE Dictionary defines "criticality" as "[a] **subjective** description of the intended use and application of the system." Ex. H (2000 IEEE Dictionary), at 251 (emphasis added); *see also* Ex. G (Keromytis Decl.), ¶¶ 47-48.

Because the intrinsic record and extrinsic evidence fail to provide an objective boundary for what constitutes a "critical" system element, a finding of indefiniteness is warranted.

VirtaMove's proposed construction should be rejected at least because it invokes the patent's unhelpful circular definition and injects new ambiguities in the form of "normally."⁵ VirtaMove's construction would only serve to confuse a jury, requiring them to debate claim construction issues (*i.e.*, what it means for a system element to be "critical") that should be left to the court. *See O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008) (when parties dispute the proper scope of claims, "the court, not the jury, must resolve that dispute"); *NobelBiz, Inc. v. Glob. Connect, L.L.C.*, 701 F. App'x 994, 997 (Fed. Cir. 2017).

⁵ VirtaMove's construction also unexplainedly excludes portions of the patent's definition requiring a CSE to be a "dynamic object."

The Court must be able to assist the jury by resolving this dispute—and it cannot meaningfully do so by adopting VirtaMove’s definition.

2. “functional replicas” (’058 patent, claim 1)

Microsoft’s Construction	VirtaMove’s Construction
Indefinite	“substantial functional equivalents or replacements of kernel functions”

The term “functional replica” likewise lacks the requisite objective boundaries to properly inform a POSITA as to its scope. *See Halliburton Energy Servs., Inc. v. M-I LLC*, 514 F.3d 1244, 1251 (Fed. Cir. 2008) (“Even if a claim term’s definition can be reduced to words, the claim is still indefinite if a person of ordinary skill in the art cannot translate the definition into meaningfully precise claim scope.”). The phrase “functional replicas” is never used within the specification and only appears once in the claim. Ex. G (Keromytis Decl.), ¶ 64. Outside the claim, the only other mention of “functional replicas” in the intrinsic record took place during prosecution, when the patentee sought to distinguish a prior art reference merely by reusing the claim language, contending that “[n]owhere does Cabrero et al. disclose the SLCSEs stored in the shared library being *functional replicas* of OSCSEs, or in other words, replacements.” Ex. D (’058 File History Excerpt, July 1, 2009, Applicant Arguments/Remarks Made in an Amendment), at 41 (emphasis added); Ex. G (Keromytis Decl.), ¶ 64. As such, the patent simply offers certain possibilities for what the library can include: 1) “replicas”; or 2) “substantial functional equivalents”; or 3) “replacements of kernel functions.” Therefore, at best, the patent explains that the term “**replica**” shall encompass any of these meanings,” but makes no effort to explain what the narrower term – *functional* replica – means. ’058 patent, 8:27-29.

VirtaMove does not argue that “functional replicas” has a plain and ordinary meaning. Plaintiff’s Disclosure of Proposed Claim Constructions, at 3. On the contrary, the patent contradicts the ordinary meaning of the term “replica” by explicitly stating that a “replica” is

“preferably not an exact copy.” ’058 patent, 1:66-2:3 (emphasis added), 8:27-32 (“replica” that is “copy of a CSE” is “not a preferred embodiment”). But the specification does not offer any explanation of what similarities or differences between system elements are sufficient to be the claimed “replica.” For instance, while stating that a “replica” should have “similar attributes” to or “essentially a same functionality” as a corresponding CSE, *id.* at 1:66-2:3, 9:49-56, the specification offers no objective measure or threshold for determining which attributes must be similar, the level of similarity that is required, or when functionality is “essentially” the same to be considered a replica. Likewise, the ’058 patent provides that a “replicated CSE may differ slightly from its counterpart in the OS,” *id.* at 5:26-28, but again offers no explanation or examples as to, for example, how the SLCSE may differ from its OSCSE counterpart, what kinds of differences are covered, or how many or what types of differences would qualify as “slight,” versus considerable, or some variation thereof. Without guidance from the specification, the claim term remains subjective, leaving a POSITA unable to understand the scope of the claims with any certainty. Ex. G (Keromytis Decl.), ¶ 55.

VirtaMove’s proposed “definition” of “functional replicas” is based on part of a single sentence in the specification describing what the “critical system element library” may include: “The CSE library includes *replicas* or *substantial functional equivalents or replacements of kernel functions*.” ’058 patent, 8:27–29 (emphasis added). Far from providing a scope of “functional replica,” that sentence simply offers certain possibilities for what the library can include: 1) “replicas”; or 2) “substantial functional equivalents”; or 3) “replacements of kernel functions.” At best, the patent explains that the term “*replica*” shall encompass any of these meanings,” but makes no effort to explain what the narrower term – *functional* replica – means. ’058 patent, 8:27–29.

VirtaMove’s reliance on the phrase “substantial functional equivalents” further complicates its indefiniteness problem because “substantial” is an undefined term of degree, which offers no clarity as to what kinds of, or how much, functional equivalency is required to satisfy the limitations of the claim. *See, e.g., In Re: Taasera Licensing LLC*, No. 2:22-MD-03042-JRG, 2023 U.S. Dist. LEXIS 221761, at *60-61 (E.D. Tex. Dec. 13, 2023) (finding term “substantially real time” indefinite, where patent recited both “real time” and “substantially real time” and the specification failed to provide “sufficient guidance for determining scope”); *see also* Ex. G (Keromytis Decl.), ¶62. The specification does not resolve this ambiguity. The specification’s only other use of the words “substantial” or “substantially” occurs in the sentence: “[T]herefore, a service in the kernel is *substantially* replicated in user mode through the use of shared libraries.” ’058 patent, 5:29-34. The patent offers no guidance regarding what degree of deviation from the kernel-mode service’s function is permissible for a replica to qualify as a “substantial functional equivalent,” which is especially problematic because the patentee deviated from ordinary meaning in specifying that replicas are “preferably not an exact copy,” as explained above. *See, e.g.,* ’058 patent, 1:66-2:3. Thus, under VirtaMove’s construction, a POSITA would not be able to determine when infringement occurs because its construction lacks “objective boundaries.” *Interval Licensing LLC*, 766 F.3d at 1371.

Because the evidence of record fails to provide any objective standard constituting the meaning of a “functional replica,” this term is indefinite.

IV. CONCLUSION

For the foregoing reasons, Microsoft respectfully requests that the Court adopt its proposed constructions.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on July 21, 2025, I electronically filed the foregoing with the Clerk of Court using the CM/ECF system, which will send notification of such filing via electronic mail to all counsel of record. Any other counsel of record will be served by first class U.S. mail.

/s/ Zachary Loney
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